

## Lesson Plan

**Name of the Faculty** : Rajesh Dawar

**Discipline** : BCA

**Semester** : 6<sup>th</sup> Semester

**Subject** : Java Prog.(BCA-304B &BCA-324B)

**Lesson Plan Duration** : 15 weeks(from January, 2018 to April, 2018)

**Work Load (Lecture/Practical)per week(in hours):** Lecture:3 , Practical:2

Week	Theory		Practical	
	Lecture Day	Topic(including Assignment/Test)	Practical Day	Topic
1 <sup>st</sup>	1 <sup>st</sup>	Introduction to java and importance of in java	1 <sup>st</sup>	Installing Java and setting environment variables.
	2 <sup>nd</sup>	History of java and importance of java for the internet	2 <sup>nd</sup>	--
	3 <sup>rd</sup>	Byte code, JVM and data types of Java		Writing Simple programs in Java
2 <sup>nd</sup>	4 <sup>th</sup>	OOPS Concepts	3 <sup>rd</sup>	Writing simple classes in java
	5 <sup>th</sup>	Operators in Java	4 <sup>th</sup>	Practicing various operators
	6 <sup>th</sup>	Concept of arrays, dynamic arrays		Implementing simple array programs like searching
3 <sup>rd</sup>	7 <sup>th</sup>	Concept of arraylist and its difference with arrays	5 <sup>th</sup>	Implementing various sorting algos and implementing dynamic arrays, implementing arraylist.
	8 <sup>th</sup>	Introducing the concept of instance and static variables	6 <sup>th</sup>	Implementing static variables and methods.

		and methods		
	9 <sup>th</sup>	Introduction to constructors and its significance along with constructor overloading.		Implementing constructors
4 <sup>th</sup>	10 <sup>th</sup>	Revision of loops and conditional statements	7 <sup>th</sup>	Implementing simple programs of loops and conditional statements.
	11 <sup>th</sup>	Concept of method overloading	8 <sup>th</sup>	Implementing method overloading
	12 <sup>th</sup>	Passing and returning objects from methods.		Practicing passing and returning objects from methods.
5 <sup>th</sup>	13 <sup>th</sup>	Concept of inheritance , its significance and implementing simple inheritance	9 <sup>th</sup>	Implementing simple inheritance.
	14 <sup>th</sup>	Concept of multiple inheritance and other types of inheritance	10 <sup>th</sup>	Practicing hierarchal and multi level inheritance.
	15 <sup>th</sup>	Concept of polymorphism, implementing dynamic binding		Practicing implementing run time polymorphism
6 <sup>th</sup>	16 <sup>th</sup>	Use of final keyword with-variables, class and methods	11 <sup>th</sup>	Implementing the use of final keyword.
	17 <sup>th</sup>	Introduction to package and use of some of the inbuilt packages	12 <sup>th</sup>	Implementing inbuilt packages
	18 <sup>th</sup>	Creating own packages and adding classes to the package.		Implementing creating own packages and adding classes to it.

7 <sup>th</sup>	19 <sup>th</sup>	Implementing various access specifiers	13 <sup>th</sup>	Practicing various access specifiers-public , private, default, public
	20 <sup>th</sup>	Problem session of unit-1	14 <sup>th</sup>	Print out of programs covered so far
	21 <sup>st</sup>	Problem session of unit-2		--do--
8 <sup>th</sup>	22 <sup>nd</sup>	Concept of multiple inheritance and implementing the same using interfaces	15 <sup>th</sup>	
	23 <sup>rd</sup>		16 <sup>th</sup>	Implementing interfaces
	24 <sup>th</sup>	Introducing abstract classes and its significance		Implementing abstract classes.
9 <sup>th</sup>	25 <sup>th</sup>	Introduction to exception handling , various types of exception, handling exceptions using try catch, concept of throw and throws keyword. Creating user defined exceptions	17 <sup>th</sup>	Handling various exceptions like Arithmetic exception etc
	26 <sup>th</sup>		18 <sup>th</sup>	Implanting concept of throw and throws keyword along with finally in java
	27 <sup>th</sup>			Handling user defined exceptions in java.
10 <sup>th</sup>	28 <sup>th</sup>	Introducing applets , its difference with application programs and its life cycle.	19 <sup>th</sup>	Implementing applet life cycle.
	29 <sup>th</sup>	Passing parameters to an applet.	20 <sup>th</sup>	Passing of parameters to applet
	30 <sup>th</sup>	Passing of unknown number of parameters to applet		Practising the class work

11 <sup>th</sup>	31 <sup>st</sup>	Test of Unit-3	21 <sup>st</sup>	Print out of programs for practical work
	32 <sup>nd</sup>	Understanding threads and methods of thread class	22 <sup>nd</sup>	Implementing methods of main thread like changing thread name etc.
	33 <sup>rd</sup>	Creating thread by inheriting from thread class		Creating and implementing threads using thread class
12 <sup>th</sup>	34 <sup>th</sup>	Creating thread by inheriting from Runnable interface	23 <sup>rd</sup>	Creating thread by inheriting from Runnable interface
	35 <sup>th</sup>		24 <sup>th</sup>	
	36 <sup>th</sup>	Fing and changing thread priorities.		Practice of class work
13 <sup>th</sup>	37 <sup>th</sup>	Inter thread synchronization and communication	25 <sup>th</sup>	Implementing inter thread synchronization and communication
	38 <sup>th</sup>	Revision of multi threading	26 <sup>th</sup>	Print out of programs for file.
	39 <sup>th</sup>	Test of multi threading		
14 <sup>th</sup>	40 <sup>th</sup>	Test of unit-4	27 <sup>th</sup>	Lab test of unit-4
	41 <sup>st</sup>	Introduction to frames and simple awt controls like textfield, button etc	28 <sup>th</sup>	Creating GUI screens in applets and frames.
	42 <sup>nd</sup>	Introduction to event handling and simple events like action event , item event etc		Handling simple events in GUI
15 <sup>th</sup>	43 <sup>rd</sup>	Difference between swing and awt controls	29 <sup>th</sup>	Implementing simple swing controls
	44 <sup>th</sup>	Revision of complete syllabus	30 <sup>th</sup>	Lab test of complete syllabus

	45 <sup>th</sup>	Test of complete syllabus		
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